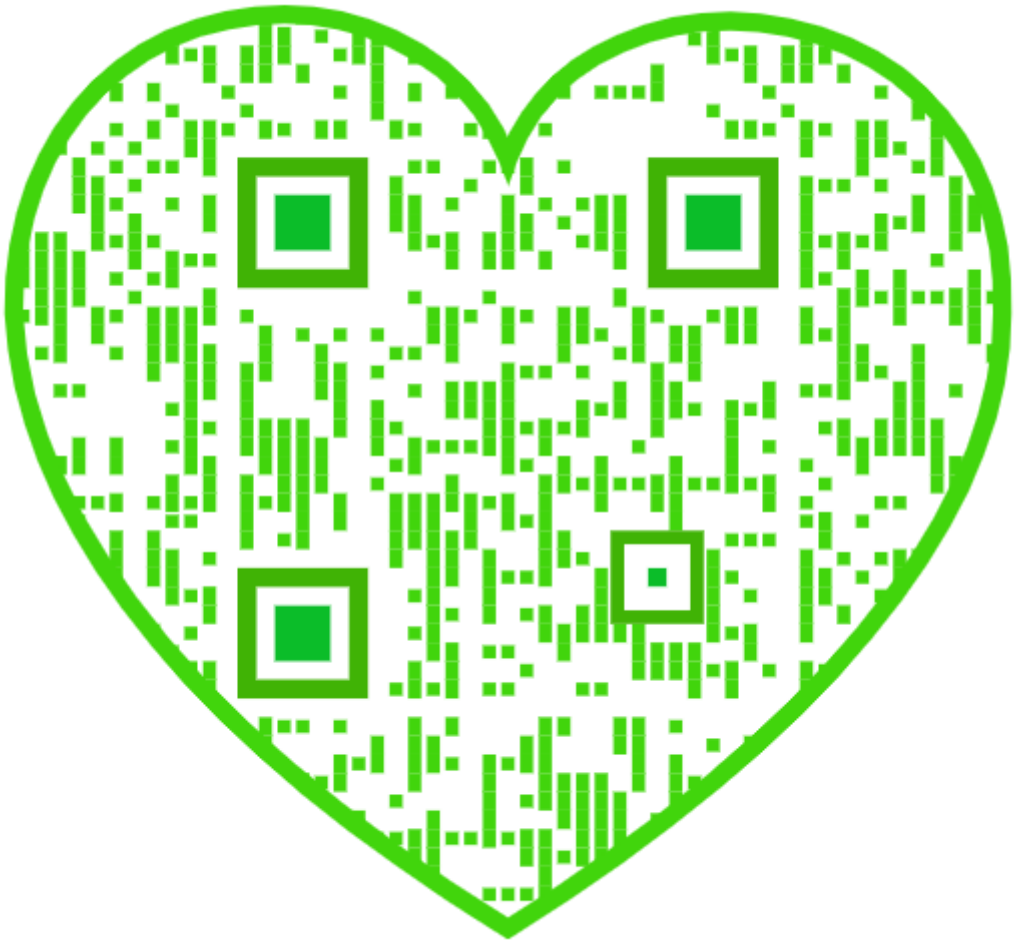
WOOD CARVING FOR PLEASURE

by

WESTERN PINE ASSOCIATION, PORTLAND, OREGON

in collaboration with

HERBERT RAYNER, WOOD CARVER



Carving on cover, by Herbert Rayner.

The symbolic carving here, in Sugar Pine (22 inches wide), is by Fritz von Schmidt, Portland, Oregon

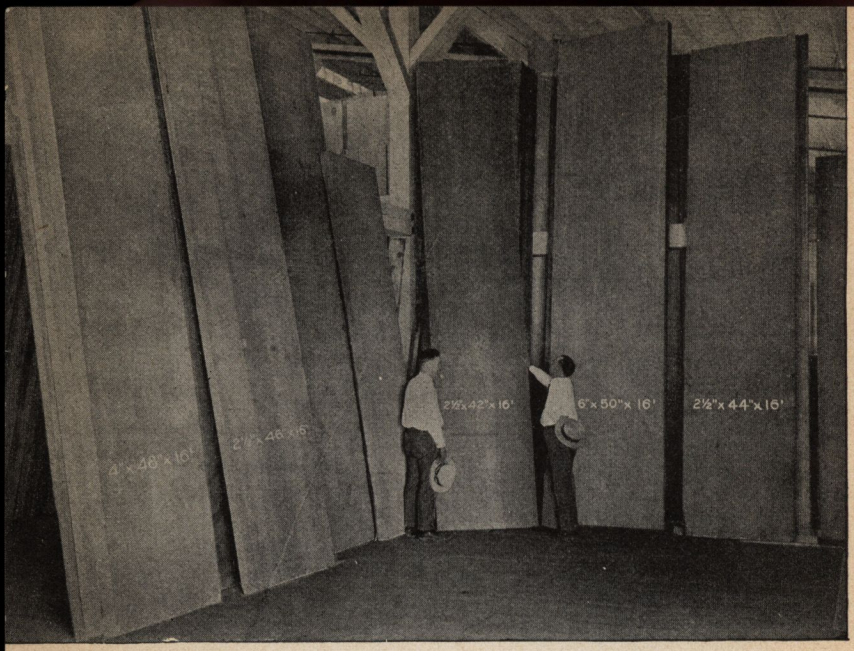
Wood Carving for Pleasure

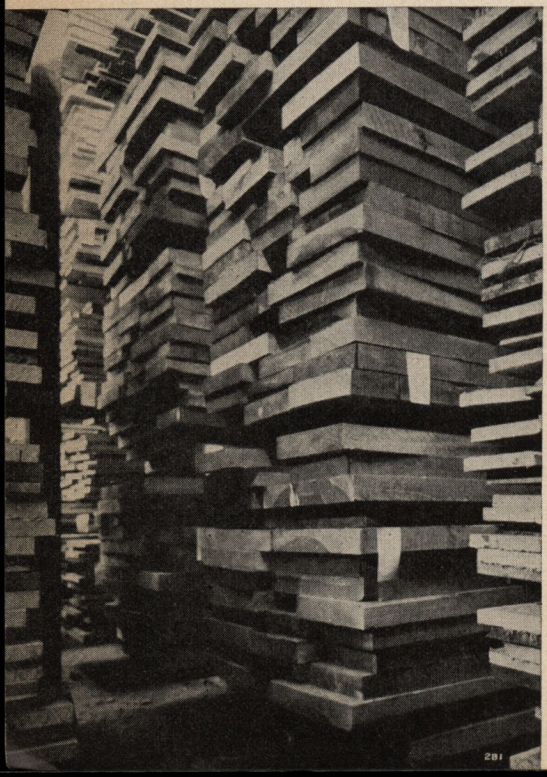
THIS book is written for the person, whether young or old, who likes to work with wood in creating forms which show the individual touch of the craftsman and are apart from ordinary hammer and saw work. Its limited contents per se, preclude adequate information on this broad subject, yet in the statements contained herein it is hoped that the amateur wood carver and the enthusiast who never before has tried his hand in this art will find help and encouragement to perfect himself further. Some may wish to continue to the point of becoming professional wood carvers but this contribution is intended primarily for the person who wants to make wood carving his hobby. The examples which are described progress far more rapidly toward the more difficult carvings than the novice can hope to do with so few trials and their purpose is mainly to show through the examples the method employed for the particular type of carving. It will be well for the beginner to master each type before proceeding to the next. In this way he will learn his technique as he goes along and will find difficult carving simpler than he had expected.

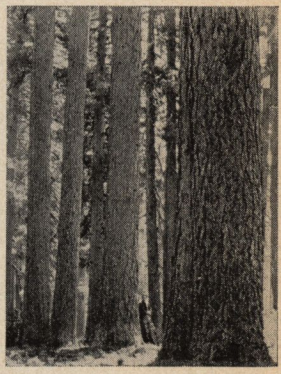
The Western Pine Association is an organization supported by Pine lumber manufacturers located in twelve western states. One of the principal species manufactured by this group is Sugar Pine. The species not only is used for wood carving and foundry pattern making, but finds its way into many items of house construction and fills many industrial wood requirements.

The Association is not itself engaged in the selling of lumber. This matter is handled by the individual mills and their sales connections. Sugar Pine enjoys a wide distribution throughout the nation and the amateur wood carver should not find it difficult to procure this material in most sections. However, if the local lumber dealer from whom you normally purchase wood for carving purposes does not have Sugar Pine in stock, we will be glad to assist this dealer in locating a source of supply. If you are interested in the use of Sugar Pine for other purposes and desire additional information regarding it, please write us if your local dealer cannot furnish you with the facts.

WESTERN PINE ASSOCIATION
Yeon Building, Portland, Oregon







Sugar Pine can be obtained in large sizes, and there is plenty of it.

SUGAR PINE

Sugar Pine, a genuine White Pine, has enjoyed a fine reputation for carvings and pattern work for years. It is an excellent wood for the amateur wood carver to start on, even though later he may wish to make some objects in hardwoods of higher cost. The fibers cling together even in fine work, yet cut easily and cleanly with or across the grain. Sugar Pine is straight grained and has an even cellular structure, lacking hard and soft streaks which are the bane of the wood carver when using some woods. It has a subdued yet pleasing figure which can be utilized to add decoration to the carving, especially in flat grained pieces. Another point worthy of note here concerning Sugar Pine is the availability of large supplies of wide and thick clear pieces measuring as much as 24″ in width and 4″ in thickness. These are of a texture suitable for carving. The sizes just mentioned are not the maximum by any means, but are given simply to show that the sawmills produce this wood in large sizes and that it can be had by the wood carver who needs the larger stock.

PRINCIPLES TO OBSERVE WHEN CARVING IN WOOD

Anybody can cut wood if it is only with an axe, but the method and tools used in wood carving are quite different. We are therefore giving you herewith some instructions and the system used by a professional wood carver for the past 34 years. There are several distinct kinds of carving in wood, from Assyrian and Egyptian type as seen on the tomb of King Tut to the present modernistic French design, in vogue at the present time.

Cutting at random in any wood without regard to the direction of the grain or the amount of wood standing in the path of the cut may easily split the wood. On the other hand, the beginner should not expect to practice wood carving without experiencing the sickening feeling which results when a piece of the finished carving accidentally is severed from the remaining part of the work. A glue pot, if handy, will prove to be a friend in need. On the other hand, by observing certain principles which will be listed, the frequency of this and other unpleasantnesses will be greatly lessened.

First, the initial cuts should be made to *sever the grain*, then work toward these cuts by slicing out clean-cut chips. This is accomplished by pressing the carving tool downward, usually at an oblique angle *with* the grain, so the chip will curl away from the tool as a shaving does from a carpenter's smoothing plane.

The *second* point concerns the worker. It is to be assumed that the amateur wood carver is more or less familiar with the use of sharp tools, but a word of caution may be timely at this point in our discussion of wood carving. *Always keep your hands behind the tool.* Such a policy is a wise safeguard against accidental stabbing or slicing of a hand should the tool slip at the wrong

Do not think that an amateur wood carver can produce an intricate carving like this Sugar Pine mirror frame, after a few lessons. It shows though what can be created in Sugar Pine by a skilled craftsman. It is the work of H. A. Foth, professional wood carver in Los Angeles, California.

moment. Do not depend on your grip to hold a block of wood rigid while you carve it. Rather, always clamp it solidly to the work bench, and beforehand allow an inch of extra length at each end of your piece for the clamps. A right-hander, in one position, will hold the tool with his left while using a mallet or while striking the tool handle with the heel of his right hand. His second position is to guide with his left while he pushes the tool with his right. In either case his hands are protected from injury when the accidental slip occurs. And the tool doubtless will slip at one time or another, so do not consider yourself the exception and get hurt because of your negligence to observe this truth.

Third among our basic principles concerns your finished carving. As mentioned in the preceding paragraph, always clamp your piece firmly to the bench. Next, *do not undercut* any part of your carving until almost the last operation. By that we mean—cut your standing parts in a manner which will leave them slightly wider at the base or ground than at the top. An undercut is apt to cause the standing work to chip out while working around it; also, undercut work is more difficult to clean up at its base. Neither sandpaper the wood beforehand nor afterwards, first because your tools will dull in shorter time and, second, because sharp lines and edges are an objective you are seeking. Why dull them with sandpaper?

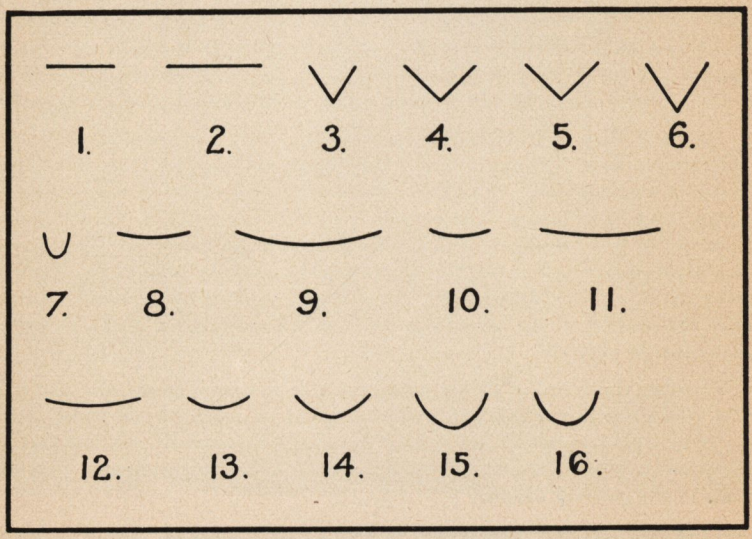
As our *fourth* principle, we should consider design. Few persons have the ability to work without a pattern and many find it difficult, at least at first, to sketch a design. But having found one to his liking, the carver should first make a full-size layout on a piece of tracing paper. If the design is to be reduced or enlarged, this can be done with a pantograph or photographically.

Another easy method of enlarging a design—and because of its simplicity probably the most commonly used—is by means of squares. This very simple process is accomplished as follows: Mark off ¼″ squares on the picture or design you intend to use. Number the lines both horizontally and vertically. Then decide how large you need the design and make the proper size squares on a plain sheet of paper. If the design is to be twice as large as the original, make the squares ½″ instead of ¼″, etc. Next, working one square at a time, trace the outline on the larger squares in the same relative position as it is in the smaller squares.

Having the design of the right size outlined on tracing paper, the next step is to transfer it to the block of wood by means of pencil carbon paper and a stylus of some sort with a blunt point (rather than a pencil), yet fine enough to follow the lines of the design on the paper which is superimposed over the block in the position desired.

Our *fifth* and final admonition is: Don't spoil a good carving by finishing with heavy varnish or paint which will destroy the delicate curves and sharp lines you have striven so hard to secure. Thin shellac, oil stains, or a thin wash of paint will serve the purpose much better.

The kit, as recommended on page 9. The skew chisel (No. 1) is on the left and the fluter (No. 16) on the right.



Full-size patterns of cutting edges of the tools illustrated above.

TOOLS

One can, if he will, buy useful wood carving tools almost without end. Fortunately though for the amateur, a comparatively small kit will serve most of the needs. Additional tools can be added as the job requires. It is well, however, to observe one rule, namely, that it pays to buy only good tools. Some carvers like to make tools out of old files, hack saw blades and the like. And if the person can temper the steel properly, these tools are often more efficient than the conventional tools. Our recommendation is a kit of 16 cutting tools, as follows:

Chisels

1. 3/8" skew chisel (fishtail model)
2. 1/2" flat chisel (straight model)

Parting Tools

3. 1/4" acute angle V parting tool
4. 3/8" pointed right angle V parting tool
5. 3/8" receding right angle V parting tool
6. 5/16" spoon, acute angle V parting tool

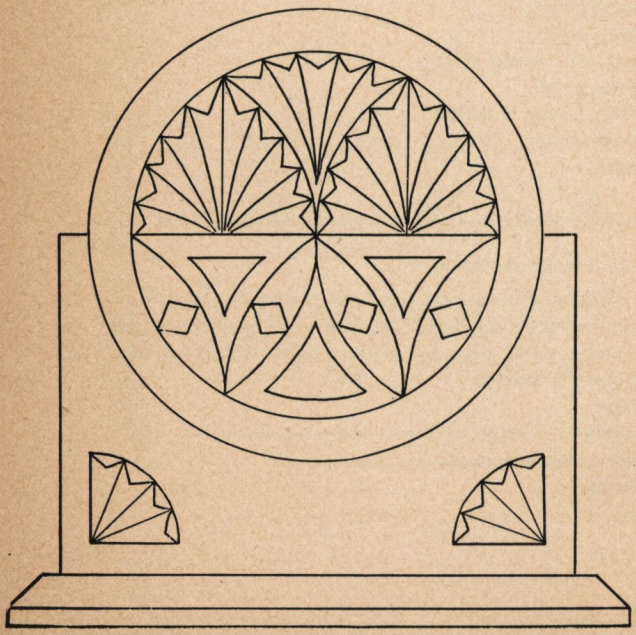
Gouges

7. 1/8" veiner
8. 3/8" flat gouge (fishtail)
9. 3/4" wide sweep gouge
10. 5/16" wide sweep gouge
11. 5/8" back bent wide sweep gouge
12. 1/2" wide sweep gouge
13. 5/16" short sweep gouge (fishtail)
14. 3/8" short sweep gouge
15. 3/8" spoon fluter
16. 5/16" fluter

(Unless noted as fishtail models, the cutting tools are straight sided).

Besides these tools, the kit should include:

17. Two round mallets of hardwood. (A light mallet for light work and a heavier one for large cuts. Lignum vitae is excellent for the heavy mallet as it provides both weight and toughness. Anyone can make a mallet).
18. A fine oil stone
19. A finer slip stone
20. A piece of heavy leather
21. Several G clamps
22. Whisk broom



Practice designs suggested by Herbert Rayner. The one at bottom (and illustration of partly completed work) is described under Chip Carvings, page 11.

If the amateur has an opportunity to examine the tools of a professional wood carver, he will notice that the handle of each cutting tool is different. There is a reason for this. The professional knows his tools by their handles and in this way he saves himself considerable time in picking up the tool needed for the job at hand. You'll find this a good practice to employ when acquiring your own kit.

No one can do carving with half-sharp tools and we suggest that you build a rack to hold them to protect the edges when the tools are not being used.

IMPORTANT TYPES OF WOOD CARVING

Having reached this point, we will next consider the principal forms of wood carving and illustrate these by examples and give directions for making them. There are many variations, governed largely by the design, but in the main there are five kinds of carving: (1) Scratch Carving, (2) Chip Carving, (3) Low Relief, (4) Bas Relief, and (5) Sculpturing or carving in the round. Pierced Carving is a form of Bas Relief Carving and differs from it largely by having the background cut out or the wood pierced, producing an appearance not unlike a grille. In this discussion we will not describe pierced work.

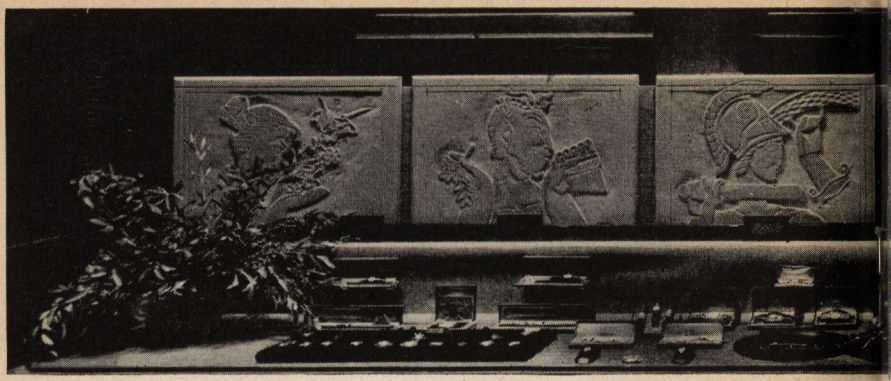
The difficulty of carving examples of each type increases in the order named. Scratch Carving or Chasing is the easiest, Sculpturing the most difficult. For this reason we will discuss the types in the same order.

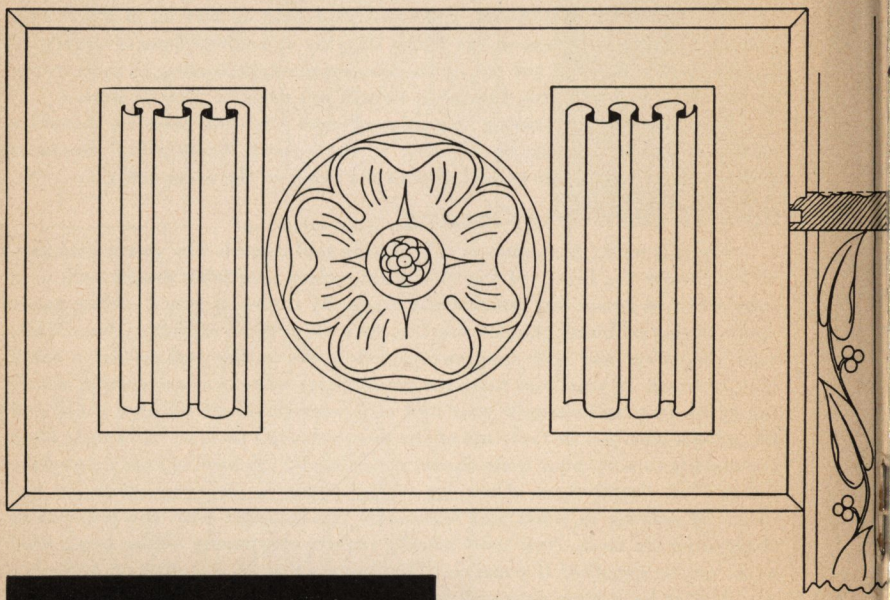
Scratch Carving or Chasing

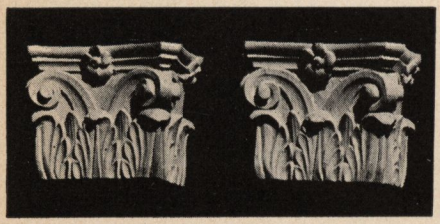
For this work, the veiner or a V parting tool is used. The veiner probably will be found the better of the two. First, select a suitable design such as a simple leaf or flower and transfer the design by means of pencil carbon paper and a stylus or blunt pointed marker, to a clear piece of Sugar Pine. Next, take the veiner and with long sweeps follow the outline, taking out a small chip of wood. If your tool tears the wood fibers when you are cutting across the grain, stop and sharpen your tool as it would indicate its edge is too dull for satisfactory use. In fact, one of the most essential facts to learn right from the start is to keep your tools sharp, regardless of the kind of carving you are doing. This simple form of carving will give you an opportunity to get the "feel" of carving in wood and familiarize the beginner with the problem of sharpening his tools. New tools usually require sharpening before being used so do not be surprised if yours do. This is done first by grinding on an emery wheel, next by honing on an oilstone, then on a finer slipstone for the inside curves and finish by stropping on a piece of heavy leather. Carving tools are honed with long bevels.

Chip Carving

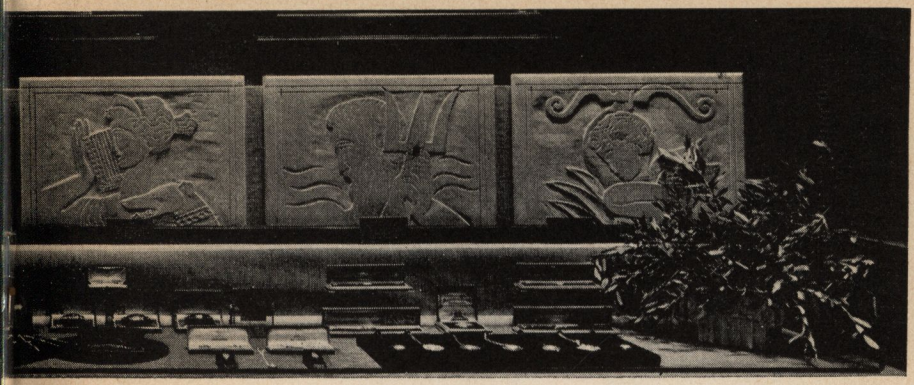
Another of the simpler forms of carving is Chip Carving. It, too, serves to teach the beginner how to hold and handle the tools. For this work we need only four cutting tools. By referring to the tools, listed by number on page 9,

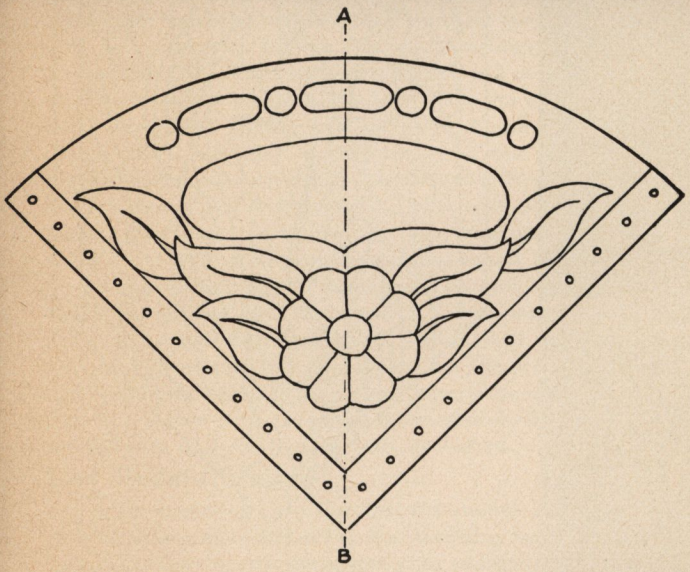


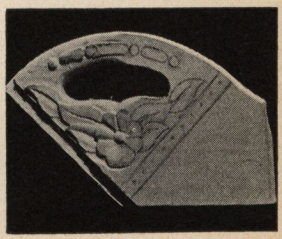




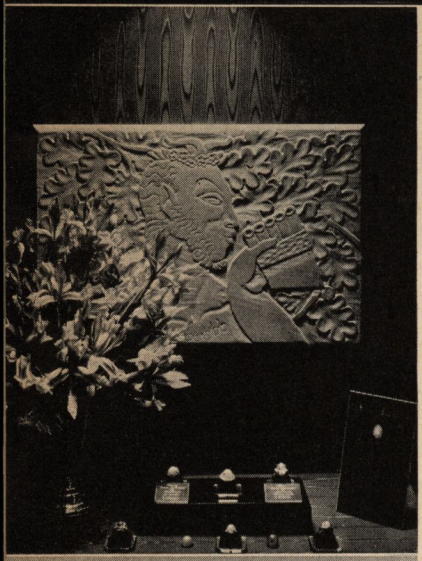
(Bottom left) Hand carved capitals of Sugar Pine for pilasters in fireplace mantel assembly, by Herbert Raynor.

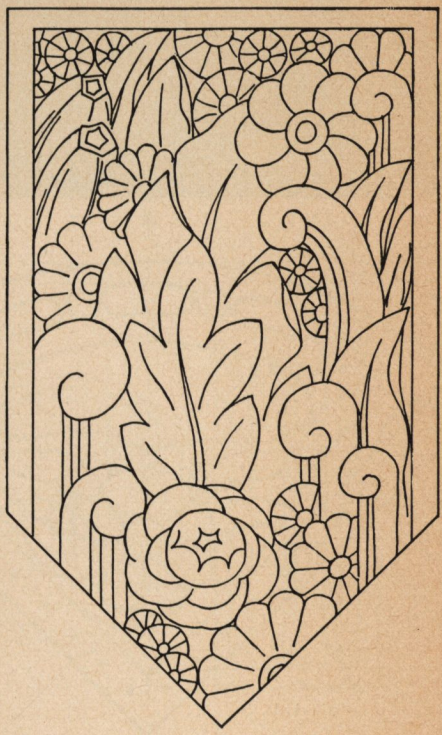






(Top) Low Relief carving by Fritz von Schmidt; (center) designs by Herbert Rayner; and (bottom right) partly completed bag handle described under Low Relief carving, page 15.





Sugar Pine carvings in illustration at top and in one below on the left, by Fritz von Schmidt; other carving and design by Herbert Rayner.

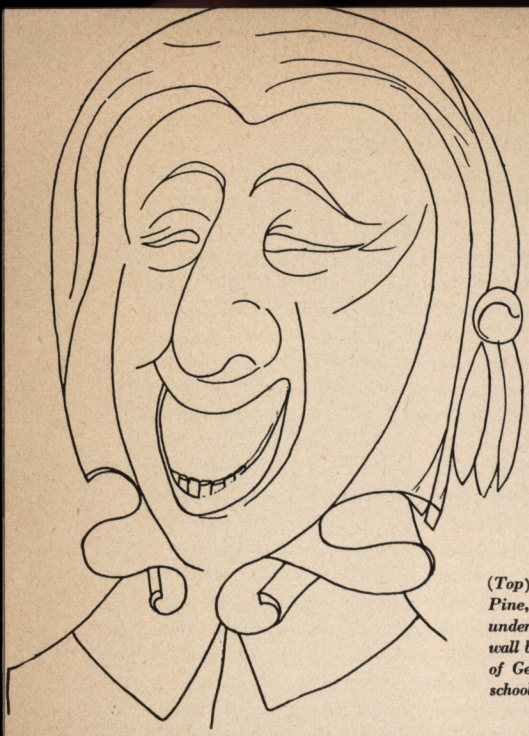
take No. 1, a skew chisel; No. 4 and No. 5, right angle V parting tools; and No. 7, a veiner. Some wood carvers like a sloyd knife, but it is not essential as the four tools, properly sharpened, are faster and are ordinarily used in the business. This style of wood carving can be applied satisfactorily on book ends, cigarette boxes, chests, trays, etc. To illustrate this style, we will describe the carving of an end of a folding book rack with base attached.

Take a piece of Sugar Pine $\frac{5}{8}$"x6"x10" and after having sketched a full size design on tracing paper, transfer it to the wood. Compasses should be used for the curved lines. We have allowed an extra inch of wood at each end to permit clamping the block to the bench. Sharpen the tools and place them near your work. With the veiner, first outline the principal lines. Next, take the pointed V parting tool (No. 4) and stab the half squares of the design, approximately to their final depth. *Do not undercut.* Now take tool No. 5, the receding right angle V parting tool, and slice lightly at apex of the pattern and steadily increase pressure on tool as you approach margin where half squares have been stabbed. Proceed slowly yet steadily and make more than one repeating cut if necessary to complete. On side which was cut against the grain, smooth with skew chisel, cutting *with* the grain. Finish all cuts of this type in the design. With pointed V parting tool, stab the whole squares which are to stand. Here also be careful not to undercut. With receding V, cut out chips at each side of the whole squares. Finish with skew chisel to edge of design, leaving the veiner marks showing. Use your whisk broom to clean out the chips. Further decoration of the standing square may be obtained with veiner by cutting out small chips at midpoint on each edge. Triangle pocket design should be cut out with the receding V tool, starting from each corner and smoothing center with skew chisel. This method will leave clean margins and bottom. After completing the carving, cut the board to finish size with jigsaw and smooth the edges. If the surface requires cleaning, use 0000 sandpaper and rub very lightly with the grain. Soon after finishing, the surfaces should be treated with stain, shellac and wax, as desired.

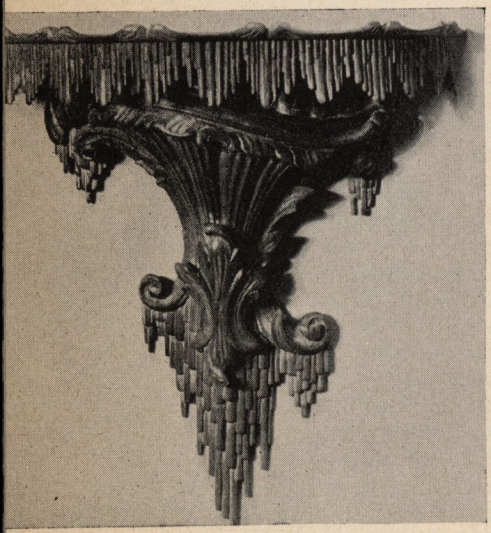
Low Relief Carving

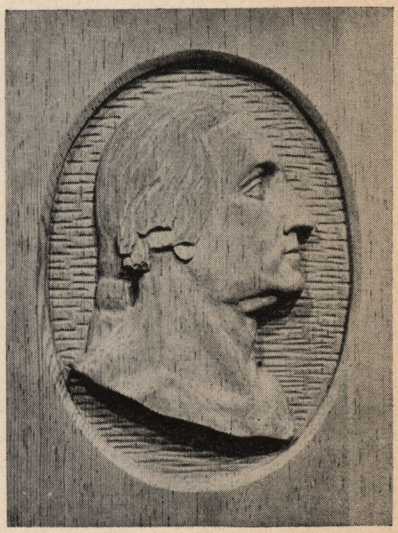
After mastering Chip Carving, the student naturally wishes to progress into something more difficult such as modeling and we would next recommend Low Relief Carving, which requires some additional tools, particularly different sizes and curvatures of gouges. A most satisfactory design in Low Relief to practice on is one with a repeating pattern such as can be used effectively on the top of a small box, margin of a picture frame or tray, or the rails of a table.

For our purpose, however, in illustrating this type of carving, we have chosen a design which can be carved on a bag handle. From our kit of cutting tools lay out eight: Numbers 2, 3, 8, 10, 12, 13, 14, 16. See that they are sharp. Next, take a piece of clear Sugar Pine $\frac{5}{8}$"x6"x10". Lay out and trace design on wood as before, the grain of the wood to run with length of handle. Before starting the carving, jig out the hand hole and shape top edge. Inside hand hole, mark with pencil the depth of background, approximately $\frac{1}{8}$".



(Top) Drawing and partly completed work in Sugar Pine, by Herbert Rayner. This example is described under Bas Relief, page 17. (Lower left) Indirect lighting wall bracket by H. A. Foth and (lower right) Bas Relief of George Washington by Junior C. Kelley, a high-school boy in Morgantown, W. Va.





Then with V parting tool (No. 3) outline the design roughly but keep about $\frac{1}{16}$" away from the line when making this cut. The effect of the cut, as you know, is to sever the grain preparatory to slicing. Beginning with bead design on handle grip, use your No. 13 gouge and other tools which fit contour of the design for outlining. Do not undercut. Slice towards the marks made by parting tool. With No. 12 tool, cut away the background to $\frac{1}{8}$" depth, cutting with the grain as much as possible. While cutting down to background depth, trim up outline of standing designs in order to insure good clean edges. In most instances it will not be necessary to use a mallet and if more than ordinary pressure is required, it can be done by striking the tool with the heel of the hand. Clean up background. *The most important point of all carving* is the next step; namely, the planes and elevations in the flower and leaf design which, if successfully done, will avoid the putty effects sometimes seen in amateur carving. Very carefully outline the margins of flower and leaf with tool that fits the design. Next, study design to determine elevation of each leaf in relation to the other and the direction each is to face. With flat chisel (No. 2) cut each leaf to its proper plane. In this instance three planes will be made. Refer to the design and on these planes sketch in the veins of the leaves. With parting tool No. 3 cut the veins. Handle the carving of the flower in the same manner. With flat gouge (No. 10) turned hollow side down, round edges of veins and face of leaf or use the tool turned face side up, depending on the modeling desired. Carve petals of flower in the same manner. With fishtail gouge (No. 13), round the center of flower, and bead and bean of handle grip, the curved face of gouge turned down. With flat gouge (No. 10), round outer and inner edges of handle. Cut attachment edges of handle to size, rabbet to depth of goods the bag is to be made of and drill holes to permit the goods to be sewed onto handle.

Bas Relief

Now having successfully carved a design in Low Relief, the amateur wood carver should not expect to be able to proceed immediately to the more difficult Bas Relief or high relief work, but in order to cover this subject in our discussion, we will describe such a carving of a grotesque head. For this project, lay out the following tools: Numbers, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16. You will need a mallet. Take a block of clear Sugar Pine, surfaced to $2\frac{3}{8}$"x 9"x14". Mark center line. Transfer design to block. Scribe a relief line $1\frac{1}{4}$" deep around edges and ends. Clamp block to bench.

With V parting tool (No. 3) and mallet, outline design, keeping away from line at least $\frac{1}{16}$". This breaks the fibers for subsequent carving. Next, cut background to approximate finished depth, using large, wide sweep gouge (No. 9) and mallet. As the depth is increased, outline with V parting tool almost to the depth the background is to be cut away. Always observe the basic principle of cutting with the grain as much as possible so that chips curve away from tool rather than cause the tool to dig into the wood. Do not under-

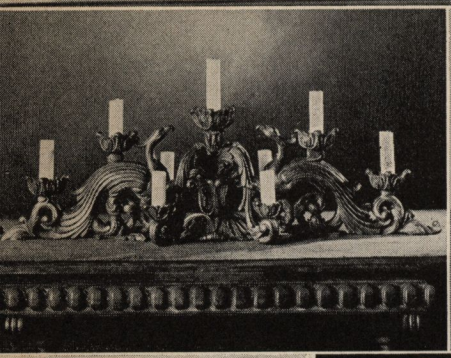
Whittler's page—Jackknife Sculpturing of chess men (top three pictures) by Darwin Teilhet, San Francisco, California; the others by N. T. MacKenzie, St. Paul, Minnesota. There are two views of "Alf." The hunter is "Alvin."

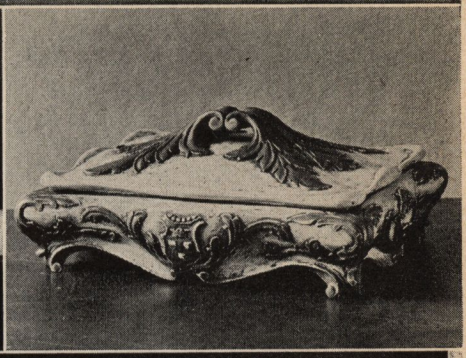
cut. Having reached approximate depth of background, smooth edge of design with flat chisel (No. 2), working with the grain and using pressure of arm for power. If contour of design demands, use appropriate gouge instead of flat chisel. Clean out corners with fluter (No. 16) so as not to leave any chisel marks in background. Mallet may be used when cutting end-grain parts of design.

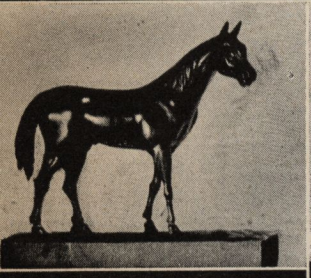
Study design from a modeling viewpoint to determine which features are the highest and which are the lowest points in the carving. In this design the nose is the highest standing part. Now with V parting tool (No. 3), cut around principal lines of design to sever the grain. These lines include the nose, chin, and face. Next, cut the different elevations and planes with flat gouge (No. 12) or flat chisel (No. 2). This will destroy some of the tracing of the design and the paper pattern should be kept handy for reference. Finish planes of hood to approximate depth, using flat chisel (No. 2). Note angles of nose, cheek and mouth and cut planes of cheek, forehead, and mouth accordingly. Proceed in same manner as before, being careful when outlining the nose not to leave tool marks. Brush chips away with whisk broom.

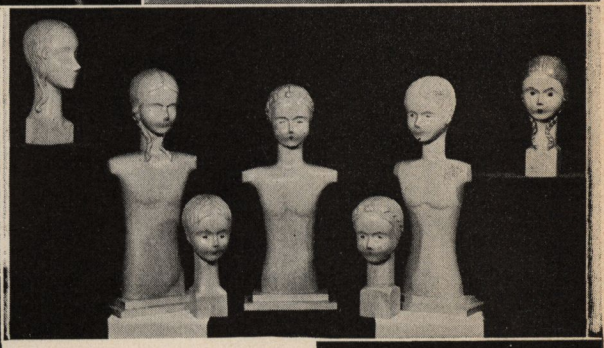
Next, fit paper design over the carving and retrace the design, where necessary, onto the main planes. With fluter (No. 16), outline lines bordering the smaller planes as above the eyes, around the nose, and at each side of the upper lip. Vary pressure of mallet stroke, depending on angle of the grain, so as to avoid chipping out the standing parts. Finish the secondary planes with flat chisel (No. 2). Study design constantly now to determine the planes of facial muscles. Carefully cut deep plane where hood borders the face. As depth is increased, use spoon V parting tool (No. 6). Bring all planes, including those around collar and shoulders, to their approximate level. Always sever the grain first with V parting tool or fluter, then slice with flat chisel or flat gouge in carving the planes. To secure planes for folds of hood, the back bent flat gouge (No. 11) will be found effective. With same tool, round the outside edge of hood. Alternate with flat chisel for part of the work. To the extent you can without risk of damaging your carving, try to acquire an ability to work equally well with both hands. This will save you the bother of frequent unclamping and clamping of the block to the bench.

It is doubly necessary as you approach the final stages of your carving to see that your tools are sharp. Having carved the main and secondary planes and elevations, study the shadows necessary to give the figure life and expression. Don't forget that the eyes are really a ball under the skin, and allow for this when carving. Proceed with modeling the larger areas, leaving the eyes and mouth until the last. These areas include the muscles of cheek, chin and forehead. It will mean slow, painstaking work if a false move and possible error are to be avoided. Refer frequently to paper design which should be on the bench in front of the carver now at all times. A rolling action of the tool frequently is helpful in slicing out a thin chip at a difficult point. Sketch with pencil onto the wood any parts of the design which will help in locating these parts on the carving.









Professional work in Sugar Pine —(top) by Arthur Clough, Eugene, Oregon; (next two) by H. A. Foth, Los Angeles, California; (the horse is of hardwood) by Herbert Rayner, Portland, Oregon; (the lower three) store display figures by E. van Elkan, New York City.

Before finishing the facial modeling, rough out the mouth to proper planes and depth, as regards its principal features. Be sure to use the V parting tool (No. 3) where sharp outlines are to be left. The fluter (No. 16) can be used where the angles are rounded. The teeth are outlined with the veiner (No. 7) and rounded with small flat gouge (No. 10). It is a good plan to turn the work on the bench at intervals to note the shadows under changed conditions of lighting. This will assist the carver as he completes the modeling. Before starting the eyes and similar small details, check all tools again for sharpness. As mentioned before, the eyeball is round and in this case is mostly covered by the skin. Cut it accordingly. Sever the grain of lines in the eyes with veiner (No. 7) and slice towards this cut. The opening of the eye will be shown by shadows which require deep cuts. This is accomplished by positioning the appropriate tool at right angles to surface of the wood and applying a steady downward pressure until the tool cuts sufficiently deep along the outline. If the eyes were open, an expert carver by his modeling could indicate if the color of the eye were light or dark. Proficiency in this line, of course, can be attained only after considerable advanced work in wood carving.

To deepen the shadows under the nose and folds of hood, undercut this portion, as the next to last operation, with fluter and other small tools which fit the contours. As the final step, finish background with flat gouge (No. 9), cutting with the grain. Leave the tool marks showing. Clean the work and finish with linseed oil or a coat of thin shellac, followed by wax. A good way to compare your carving with other relief carving is to note the planes and elevations in the head on a U. S. coin, such as a penny or a nickel. If your work emulates this, then you are well on your way in mastering this art.

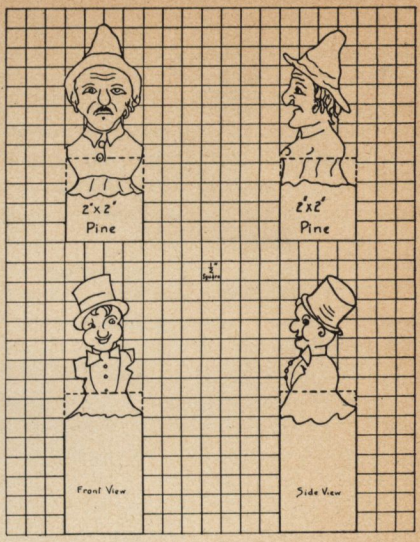
Pierced Carving

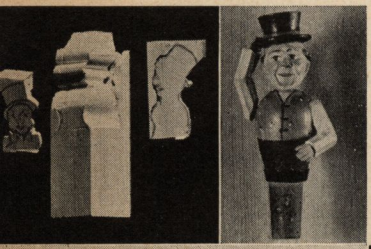
Pierced Carving is a form of Bas Relief with the background cut out with a jig saw. In such work the sawing is done before the carving is started. There are many interesting uses for pierced carving, grilles of various kinds being the more usual forms.

Sculpturing

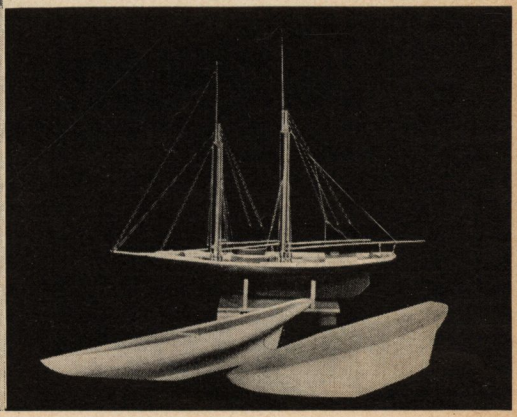
We hesitate to suggest any examples of Sculpturing as this is the most difficult of wood carving. To be done well, Sculpturing requires considerable skill, if one is to produce an article which is more than jackknife work. The latter is fun but really cannot be classed as wood carving. However, in order to round out this discussion of wood carving, we will take as an example a small object—a carved wood bottle stopper—made from a block of clear Sugar Pine measuring 2″x2″x6″.

Transfer the design (both front and side views) onto two sides of block at one end. Jigsaw the outline on one face, backing saw out of cut so as to leave the waste attached to block. Then turn block and jigsaw outline of side view. This then leaves your pattern in proper scale on the four sides. Next, cut off the waste at four corners of block.





The elephant is carved out of a single block; two designs for bottle stoppers, by Herbert Rayner, one is described under Sculpturing on page 21; another bottle stopper; statuette of Paul Bunyon (10" high) made by Woodart Co., Dubuque, Iowa, from drawings by W. B. Laughead; scale-model sailboat by Boucher Plaything Mfg. Corp., New York City; all of Sugar Pine.



Now take block to bench and clamp it horizontally at one end. Mark center line on front face. For the balance of the modeling follow the steps described in the example of Bas Relief Carving, in that you first carve the main and secondary planes and elevations and then finish the finer details which give the design life and expression. The tools, of course, should be of the proper size and shape for the work. The carver can, of course, try his hand at Sculpturing first with a sharp jackknife on small blocks, and then on larger blocks model a simple design with regular wood carving tools. Always bring a sculptured carving to its final form equally from all sides as the design must be kept in scale when viewed from any angle.

After completing this example of Sculpturing, the base should be cut to desired length and the cork attached. Then apply thin shellac and wax.

SUMMARY

1. Sugar Pine is very definitely suitable for carving even by beginners in the art. Aside from its easy cutting qualities, Sugar Pine is furnished dry; holds its shape; glues well; and is readily available in large sizes.

2. A limited number of tools will serve most needs.

3. The novice should master the simpler forms of carving before trying the more difficult ones.

4. Public libraries and book shops have helpful books on wood carving, and homecraft magazines frequently publish articles on this subject. Such sources provide excellent reference material.

Sugar Pine Carving by Fritz von Schmidt.

About

A Genuine White Pine

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